

GENUS.—*APLOCHITON*. *Jen.*

*Corpus elongatum, compressum, subfusiforme, undique nudum alepidotum. Caput parvum. Rostrum breviusculum, subacutum. Os terminale, rictu modico. Maxilla superior margine ex ossibus intermaxillaribus omnino formato, maxillaribus, hæc subæquantibus, reductis. Dentes minuti, acuti, in maxillâ utraq̃ue uniseriati, in linguâ et vomere longitudinaliter biseriati, in ossibus palatinis nulli. Apertura branchialis amplissima, membranâ triradiatâ, subtus profundè emarginatâ. Pinne, dorsalis paululum pone ventrales, analis paululum pone dorsalem reclinatam, exorientes. Ventrales appendicibus axillaribus nullis. Pinna caudalis bifurca.*

I have already noticed a remarkable new form among the *Cyprinidæ* brought home by Mr. Darwin, and differing from all the known genera in that family by the entire absence of scales. The one now to be described is not less remarkable among the *Salmonidæ*, and, what is particularly interesting, would seem to occupy an exactly analogous place in this family, departing from it in the same important character of having the skin perfectly naked and free from scales. There are, however, many other points of similarity between *Mesites* and the genus which I have here termed *Aplochiton*.\* In both there is the same form of mouth, the margin of the upper jaw being entirely formed by the intermaxillary, behind which is the maxillary of nearly equal development. The teeth in the jaws are similar, both in regard to form and arrangement; there is also the same double longitudinal row on the tongue, and along the vomer. The pieces of the opercle are similar, and the gill opening equally large in both genera, though the branchial membrane has twice the number of rays in *Mesites* that it has in *Aplochiton*. Furthermore, the fins are on the whole very similar, with the exception of the dorsal not being so far back in *Aplochiton*, and there being also an adipose in this genus. It is also deserving of notice that both these new forms, so resembling each other in many of their characters, come from the same quarter of the globe, being found either in the most southern parts of S. America, or in the neighbouring islands.

From the circumstance of the naked skin, *Aplochiton* might by some be referred to the *Siluridæ*, but what was said of the genus *Mesites* may be repeated here, that it has none of the other external characters of that family. The maxillary, instead of being reduced to a mere vestige, or lengthened into a barbule, is as much developed as in any of the *Cyprinidæ*, and of the usual form; the subopercle also is very distinct;† while there is no strong spine at the commencement of either the dorsal or pectoral fins. At the same time it must be mentioned that *Aplochiton*

\* Ab απλοος simplex, et χιτων tunica.

† Valenciennes says, in his preface to the fifteenth volume of the "Histoire des Poissons," that none of the *Siluridæ* have the subopercle; and that the absence of this bone serves to distinguish them from *Cobitis*.

agrees with the *Siluridæ* in having no cæcal appendages, though the air-bladder is similar to that of the ordinary *Salmonidæ*. There are some peculiarities connected with the anal and sexual orifices which I shall notice presently, along with other points in the internal structure, in the species to be described first.

Mr. Darwin has brought home two species of this new genus, agreeing precisely in form, but very distinct in respect to size and colouring.

1. *APLOCHITON ZEBRA*. *Jen.*

PLATE XXIV. FIG. 1.

*A. obscure plumbeus; fasciis nigris transversis: maxillis æqualibus.*

B. 3; D. 11; A. 2/14; C. 16, &c.; P. 18; V. 7.

LONG. unc. 9. lin. 6.

FORM.—General form somewhat resembling that of the *Machare*, elongated, and approaching to fusiform. Greatest depth about the middle, equalling one-sixth of the entire length. Line of the back and profile nearly straight, the latter falling very little. Greatest thickness rather more than half the depth. Head small, contained about five and a half times in the entire length. Snout short, but rather acute. Mouth with a moderate gape reaching to beneath the anterior angle of the eye: when shut, both jaws equal, the lower one ascending at an angle of 45° to meet the upper; when open, the lower one a little the longest. Margin of the upper jaw formed by the intermaxillary, the maxillary appearing behind it. A single row of small but sharp teeth extending along the entire margins of both jaws: a double row of similar teeth, but stronger and more curved, down the middle of the tongue; also a double row along the middle of the vomer. Eyes moderate; their diameter four and a half times in the length of the head; distant about one diameter and a quarter from the end of the snout, and with an interval between them of about one and a half. Nostrils with two orifices, both roundish, one before the other, with a little interval between, the posterior one rather the largest. Two distinct pores on each side of the crown, one behind the other with an interval between, above and rather behind the eyes. Gill-opening very large, the membrane with only three flattened rays, deeply notched beneath, the notch reaching to beneath the middle of the eyes. All the pieces of the opercle present, but the interopercle only just appearing behind the angle of the preopercle, and the subopercle forming but a narrow lanceolate lamina beneath the true opercle, which last constitutes the greater portion of the gill-flap, and is of an oblong form, the posterior margin being cut straight and vertical.

The whole skin perfectly naked everywhere, without the least vestige of scales. No lateral line, except a faint streak, passing along the middle of the sides, be so called. Dorsal commencing at the middle of the length, this last being measured to the base of the caudal fork; of the same form as in the ordinary species of the genus *Salmo*; its greatest height a little exceeding its length, which last is rather more than half the depth of the body; first ray simple, the rest branched. Adipose small, and just half way between the end of the dorsal and the base of the caudal. Anal of a somewhat triangular form, the margin sloping very much off backwards, commencing a little beyond the tip of the reclined dorsal, and terminating opposite